

District Wide MFL Program

**Water Supply Regulation
Water Supply Department**

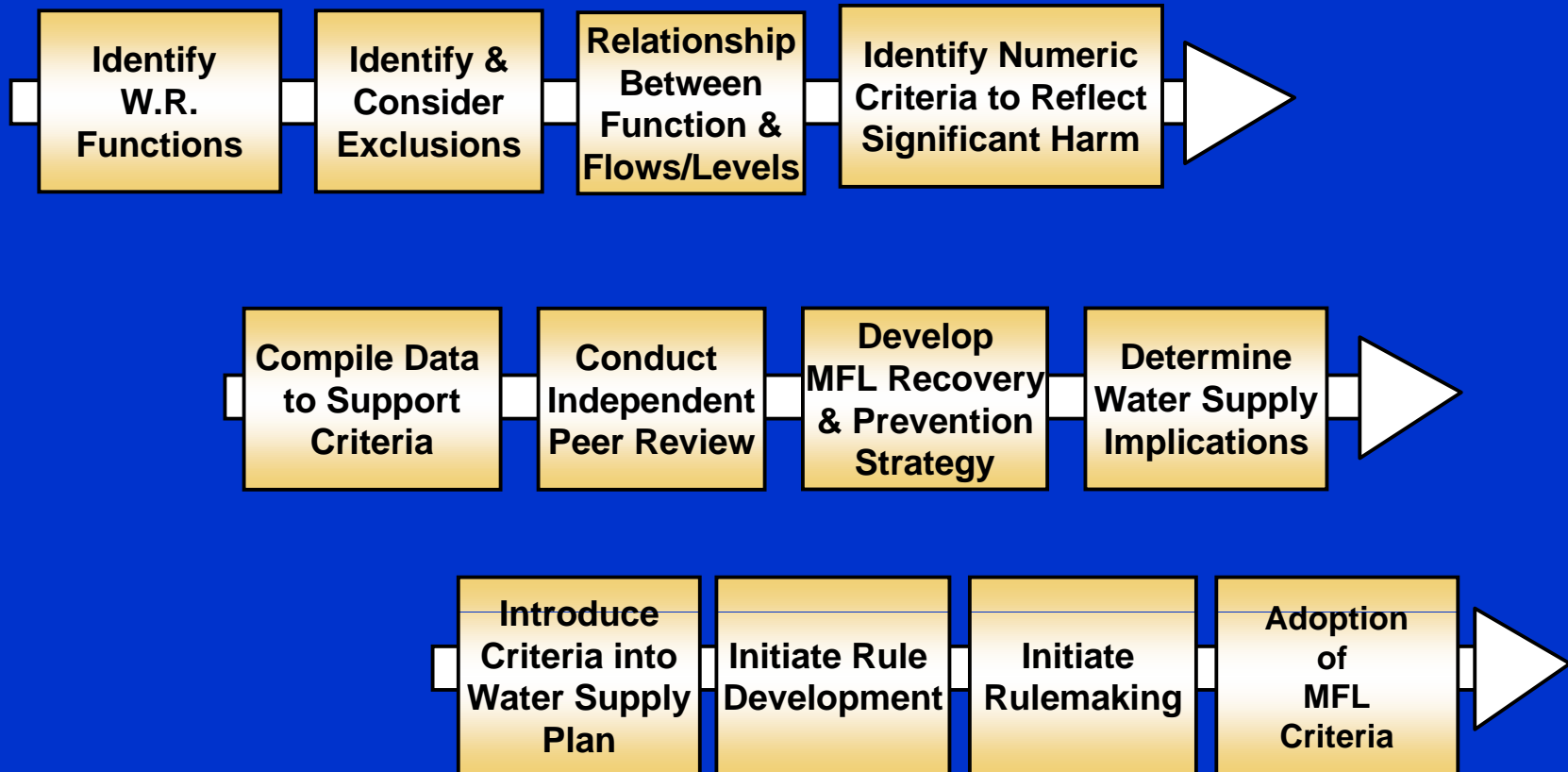
Minimum Flow

The minimum flow for a given watercourse shall be the limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area

Minimum Level

The minimum water level shall be the level of groundwater in an aquifer and the level of surface water at which further withdrawals would be significantly harmful to the water resources of the area.

The MFL Process



Priority MFLs for the Year 2000

- Surface Waters:

- Lake Okeechobee
- Everglades National Park & WCAs
- Caloosahatchee River & Estuary

Priority MFLs for the Year 2000

- **Ground Waters:**

- **Biscayne Aquifer**

- **Lower West Coast Aquifer System**

Benefits of MFLs

- **Provides a Tool for Operations, Planning and Allocation of Water by Specifying the Extent and Limits of the Availability of the State's Surface Water and Ground Water**
- **Provides an Additional Level of Protection for the State's Water Resources**

Relationship to other District Efforts

- 1. Restudy**
- 2. Regional Water Supply Plans**
- 3. Restoration Projects**
- 4. Regulatory Program**
- 5. Water Shortage Program**

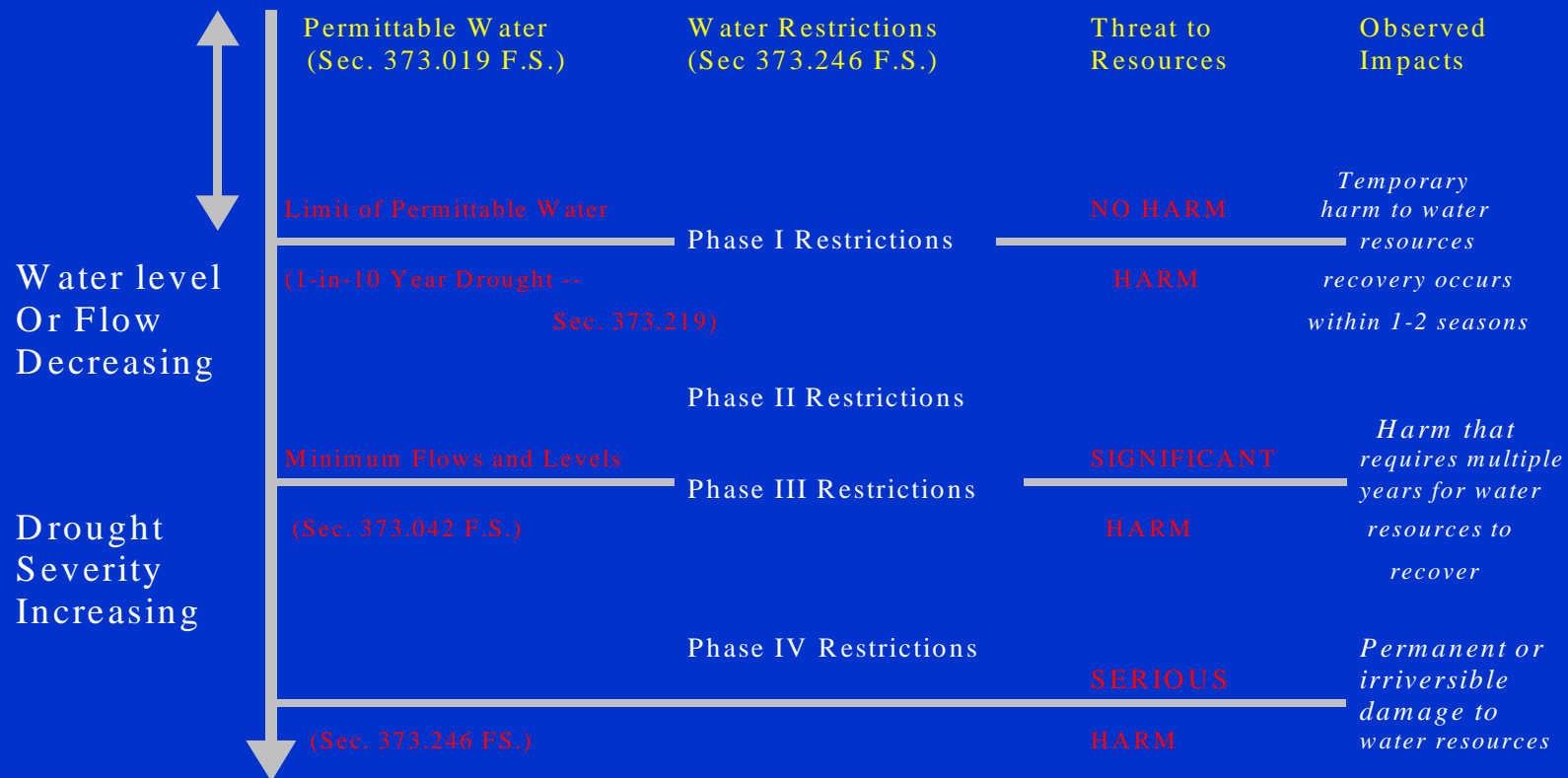
What if We Don't Adopt MFLs?

- **More Violations of Significant Harm Levels**
- **Loss of Protection for Water Resources**
- **Potential Loss of Critical Habitat/Species**

Recognize Chapter 373 Goals

- **Overall Sustainability of Water Resources**
- **No Harm - Regulatory**
- **No Significant Harm - MFL**
- **No Serious Harm - Water Shortage**

Chapter 373 Resource Protection Model



Steps for Identifying Significant Harm

- **Identify Functions of Water Resource to be Protected**
- **Use Exclusions/Considerations to Identify Baseline Condition of Resource**
- **Identify Indicators of Harm Relative to Resource Functions**
- **Identify Technical Relationship between Water Resource Impacts and Changing Hydrologic Conditions**

Minimum Flows and Levels Recovery & Prevention Strategy

When Required?

**When existing flow/level is below or
projected to fall below established
minimum flows and levels**

Water Supply Plans & Recovery/Prevention Strategy

- **Development of Additional Water Supplies**
- **Implementation of Conservation Measures**
- **Phasing/Timetable**
- **Provide alternative “concurrent with to the extent practical, and to offset, reductions in permitted withdrawals”**

Vehicle for Water Resource Protection

- **Reservation of Water**
- **Consumptive Use Permitting (CUP)**
- **Minimum Flows and Levels (MFLs)**
- **Water Shortage Program**

Water Resource Functions of Ground Water Systems

- **Wetlands**
- **Stream Flows/Surface Water Bodies**
- **Water Quality**
- **Water Supply Availability**
- **Surface Water Storage**
- **Land Use**
- **Fire/Exotics**

Water Resource

Function

Protection

Strategy

Wetland/Streamflow → Reservations/CUP/MFL

Water Quality → CUP

Water Supply → CUP/MFL

Land Use → CUP/MFL

WHAT IS LEVEL OF CERTAINTY?

**Assurance provided that water
will be available to meet
reasonable demands up to
specified hydrologic conditions**

WHY IS LEVEL OF CERTAINTY CONCEPT NEEDED ?

- **Protection of the Environment**
 - **Prevention of harmful withdrawal impacts**
 - **Reservation of water supplies for protection and enhancement**
- **Protection of Consumptive Uses**

Proposed Inter-Relationship of Water Resource Protection Criteria



STATUTORY TOOLS FOR DEFINING WATER SUPPLY CERTAINTY

- **Minimum Flows and Levels:**
 - identify point of significant harm & develop prevention/recovery plan;
- **Reservations:**
 - set aside water from allocation for protection of fish and wildlife or public health and safety;

STATUTORY TOOLS FOR DEFINING WATER SUPPLY CERTAINTY

- **Consumptive Use Permitting:**
 - allocate water to prevent harm to the water resources and meet objectives of the district;
- **Water Shortage Program:**
 - impose temporary water use restrictions during droughts to prevent serious harm.

LEVEL OF CERTAINTY POLICY ISSUES

- **Use 1-in-10 year level of certainty as planning goal.**
- **Develop regional water supply plans using proposed resource protection framework as basis.**
- **Address shared adversity concept through drought management tools, e.g., water shortage plan.**

WHAT IS A WATER RESERVATION?

- Set aside water from allocation; “permit” for the environment
- Protection of fish and wildlife and public health and safety
- Existing legal users protected if not contrary to public interest

HOW DO WE QUANTIFY WATER TO BE RESERVED?

- Reflect operational protocols and environmental performance in 2020
Restudy model runs?
- Rainfall driven formula?

LINK RESERVATION TO PLAN IMPLEMENTATION

- **Identify reservation in phases based on schedule for associated water resource development.**
- **Develop water allocation criteria to meet reservation through 1-in-10 year drought and shared adversity during dry conditions.**
- **Develop operational protocol for implementation during drought and non-drought scenarios.**

RESERVATION POLICY ISSUES

- **Identify reservation based on restoration demands of the natural system (Restudy/CERP in 2020).**
- **Link reservation with regional water supply plan implementation.**
- **Identify level of certainty and water shortage implementation tools for reservation.**
- **Where to develop? Everglades National Park, Water Conservation Areas, Biscayne Aquifer.**

NEED FOR PERIODIC UPDATE AND REVIEW OF MFL CRITERIA

Minimum Flows and Levels criteria adopted as part of a Water Supply Plan should be updated periodically to incorporate new technical information, and research results. It is the intent of the District to review and update the MFL criteria, as new information becomes available. This will be part of the 5-year Water Supply Plan update.